

# Sleep Disorders

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Approximately 75% of American adults reported having had at least one symptom of a sleep problem a few nights a week or more within the past year. Sleep disorders can present across the entire spectrum of age, from children to older adults. The range of conditions that contribute to insomnia or excessive daytime sleepiness include: normal responses to lack of sleep, underlying medical conditions, and the primary sleep disorders. The key in establishing a diagnosis is gathering important historical information about the problem and the patient's risk for a given sleep disorder and using it to guide options for treatment or further testing.

## INSOMNIA

Insomnia is the sleep disorder that is most prevalent in the general population. Insomnia is defined as a complaint of difficulty falling asleep, staying asleep, or sleep that is chronically perceived by the patient as nonrestorative or lacking in quality. The diagnosis of insomnia is further classified as adjustment insomnia (defined as insomnia lasting less than 3 months and due to a psychosocial stressor), insomnia due to medical disorders, insomnia due to psychiatric disorders, and idiopathic insomnia.

### Symptoms

- Trouble falling asleep ++++
- Inability to stay asleep++++
- Nonrestorative sleep
- Daytime sleepiness

### Signs

- Tired appearance
- Frequent yawning
- Somnolence

### Workup

- Sleep history for evidence of sleep apnea, restless legs disorder, periodic limb movement disorder, inadequate sleep hygiene, or substance use
- Further testing is not necessary unless there is suspicion for another sleep disorder.

### Comments and Treatment Considerations

Sleep hygiene is the mainstay of treatment and consists of regular sleep and wake times; avoiding caffeine, nicotine, and alcohol; regular exercise (not in evening hours); avoiding regular use of hypnotics; and sleeping in a quiet, relaxing environment. Treat underlying medical and/or psychiatric disorders that are disrupting sleep and administer cautious use of hypnotics for adjustment insomnia. Incorporate relaxation techniques and CBT.

## NARCOLEPSY

Narcolepsy is a neurologic disorder characterized by a disturbance in the sleep-wake system in the brain that allows for the wakeful state to be interrupted by the sleep state and vice versa. It is usually identified after years of struggle and disability experienced by the patient. It is present in 1 in 2000 individuals.

### Symptoms

- Excessive daytime sleepiness
- Sleep paralysis
- Cataplexy +++
- Hypnagogic hallucinations
- Hyperactivity in children

### Signs

- Sleep attacks

### Workup

- Combination of excessive daytime sleepiness and cataplexy nearly always is due to narcolepsy
- Polysomnography with multiple sleep latency tests is confirmatory.

### Comments and Treatment Considerations

Stimulants include methylphenidate and dextroamphetamine. A wake-promoting drug, modafinil, is first-line therapy. Cataplexy may be managed with TCAs, SSRIs, or venlafaxine. Suggest regular sleep times and scheduled daytime napping.

## OBSTRUCTIVE SLEEP APNEA

Obstructive sleep apnea (OSA) is diagnosed by the presence of apneic episodes and hypopneic episodes detected during polysomnography. Symptoms of sleep apnea were present in 26% of U.S. adults in a national survey. In addition, sleep apnea is also found in the pediatric population at a rate of 2% to 4% in one U.S. series.

### Symptoms

- Snoring
- Witnessed apnea during sleep
- Nonrestorative sleep

- Excessive daytime sleepiness
- Headache
- Increased activity (children)

### Signs

- Obesity
- Thick neck
- Somnolence
- Enlarged tonsils
- Adenoid facies
- Reduced pharyngeal volume
- Elevated BP

### Workup

- Overnight polysomnography
- Overnight oximetry (suggestive, but not diagnostic)

### Comments and Treatment Considerations

Continuous positive airway pressure (CPAP) is most commonly used in adults. A Cochrane Review concluded that it does reduce symptoms of sleepiness and improve quality of life for those with moderate and severe OSA. Some patients benefit from oral appliances and supplemental oxygen. Pediatric patients with evidence of enlarged adenoids or tonsils may benefit from surgical removal.

## RESTLESS LEGS SYNDROME AND PERIODIC LIMB MOVEMENTS IN SLEEP

Restless legs syndrome (RLS) and periodic limb movements in sleep (PLMS) often coexist. The distinction is that in RLS the symptoms interfere with sleep initiation and in periodic limb movement disorder the symptoms lead to arousal from sleep and poor quality of sleep. Either disorder can also manifest involuntary leg movements during the day.

### Symptoms

- Crawling or “pins and needles” sensation in legs, relieved only by moving the legs ++++
- Repeated leg jerks that arouse from sleep
- Excessive daytime sleepiness
- Difficulty in falling or staying asleep

### Workup

- Evaluate for iron deficiency anemia, uremia, neuropathy, and peripheral vascular disease.
- Polysomnography for confirmation, if history not clear

### Comments and Treatment Considerations

Dopamine agonists are generally considered first-line treatment. Ropinirole is the only FDA-approved agent available. Evidence supports the use of levodopa, levodopa-carbidopa, and pramipexole.

Anticonvulsants such as gabapentin, carbamazepine, benzodiazepines, and opiates are frequently chosen as alternative agents for treatment. Patients with evidence of low iron stores should be treated.

## TRANSIENT DISTURBANCE IN CIRCADIAN RHYTHM

Jet lag and shift work result from alterations in a person's daily schedule that conflict with the intrinsic circadian rhythm of the body. Due to either a change in time zone or working at hours normally associated with sleep, the patient experiences difficulty with wakefulness and performance.

### Symptoms

- Daytime sleepiness
- Insomnia
- Loss of appetite
- Mood disturbances
- Difficulty concentrating

### Workup

- Sleep history

### Comments and Treatment Considerations

Take 0.5 to 5 mg melatonin around target bedtime of destination or targeted sleep time for shift worker. Use bright light exposure in nighttime work environment and avoid light cues during daytime sleep hours.

### References

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